20. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber, comprising the steps of:

a. preparing an aqueous amide crosslinked polymer solution of about 10 to about 75 percent by weight of a linear super-absorbent precursor polymer having a molecular weight of from about 300,000 to about 10,000,000;

b. extruding said polymer solution at a temperature of from about 20°C to about 180°C and a viscosity of from about 3 to about 1000 Pa sec through a die having a plurality of orifices to form a plurality of threadlines, said orifices having diameters in the range of from about 0.20 to about 1.2 mm; and

c. attenuating said threadlines with a primary gaseous source under conditions sufficient to permit the viscosity of each threadline, as it leaves a die orifice and for a distance of no more than about 8 cm, to increase incrementally with increasing distance from the die, while substantially maintaining uniformity of viscosity in the radial direction, at a rate sufficient to provide fibers having the desired attenuation and mean fiber diameter without significant fiber breakage.

21. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 20, wherein said primary gaseous source has a relative humidity of from about 30 to 100 percent.

22. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 21, wherein said primary gaseous source has a temperature of from about 20°C to about 100°C, a velocity of from about 150 to about 400 m/s, a horizontal angle of incidence of from about 70° to about 110°, and a vertical angle of incidence of no more than about 90°.

23. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 20, wherein said primary gaseous source has a relative humidity of from about 60 to 95 percent.

24. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 23, wherein said primary gaseous source has a temperature of from about 20°C to about 100°C, a velocity of from about 30 to about 150 m/s, a horizontal angle of incidence of from about 70° to about 110°, and a vertical angle of incidence of no more than about 90°.

25. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 20, wherein said primary gaseous source primary gaseous source has a relative humidity of from about 65 to 90 percent.

26. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 25, wherein said primary gaseous source has a temperature of from about 20°C to about 100°C, a velocity of less than about 30 m/s, a horizontal angle of incidence of from about 70° to about 110°, and a vertical angle of incidence of about 90°.

27. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 22, further comprising:

d. drying said threadlines to form fibers with a secondary gaseous source at a temperature of from about 140°C to about 320°C and having a velocity of from about 60 to about 125 m/s, which secondary gaseous source has a horizontal angle of inci-

dence of from about 70° to about 110°, and a vertical angle of incidence of no more than about 90°.

28. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 27, further comprising:

e. depositing the fibers randomly on a moving foraminous surface to form a substantially uniform web on a scale of from about 0.4 to about 1.9 cm^2, said moving foraminous surface being from about 10 to about 60 cm from the opening from which the last gaseous source to contact the threadlines emerges, which fibers have a mean fiber diameter in the range of from about 0.1 to about 10 μm and are substantially free of shot; wherein said attenuating and drying steps are carried out under conditions of controlled macro scale turbulence and said fibers are of a length such that they can be regarded as continuous in comparison with their diameters.

29. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 28 further comprising:

f. exposing said uniform web to a high energy source selected from the group consisting of heat, electron beam, microwave, and radio frequency irradiation to render a stable crosslink in the synthetic precursor polymer.

30. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 28, further comprising:

g. post treating the stabilized web by humidifying, compacting, embossing, bonding, or laminating, or a combination thereof.

31. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 24, further comprising:

d. drying said threadlines to form fibers with a secondary gaseous source at a temperature of from about 140°C to about 320°C and having a velocity of from about 30 to about 150 m/s, which secondary gaseous source has a horizontal angle of incidence of from about 70° to about 110°, and a vertical angle of incidence of no more than about 90°.

32. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 31, further comprising:

e. depositing the fibers randomly on a moving foraminous surface to form a substantially uniform web on a scale of from about 1.9 to about 6.5 cm^2, said moving foraminous surface being from about 10 to about 100 cm from the opening from which the last gaseous source to contact the threadlines emerges, which fibers have a mean fiber diameter in the range of from about 10 to about 30 μm and are substantially uniform in diameter; wherein said attenuating and drying steps are carried out under conditions of minimal macro scale turbulence.

33. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 32, further comprising:

f. exposing said uniform web to a high energy source selected from the group consisting of heat, electron beam, microwave, and radio frequency irradiation to render a stable crosslink in the synthetic precursor polymer.

34. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 33, further comprising:

g. post treating the stabilized web by humidifying, compacting, embossing, bonding, or laminating, or a combination thereof.

35. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 26, further comprising:

d. drying said threadlines to form fibers with a secondary gaseous source at a temperature of from about 140°C to about 320°C and having a velocity of less than about 30 m/s, which secondary gaseous source has a horizontal angle of incidence of from about 70° to about 110°, and a vertical angle of incidence of no more than about 90°.

36. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 35, further comprising:

e. attenuating said fibers with a tertiary gaseous source having a temperature of from about 10°C to about 50°C, a velocity of from about 30 to about 240 m/s, a horizontal angle of incidence of from about 70° to about 110°, and a vertical angle of incidence of no more than about 90°.

37. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 36, further comprising:

f. depositing the fibers randomly on a moving foraminous surface to form a substantially uniform web on a scale of from about 1.9 to about 6.5 cm^2, said moving foraminous surface being

from about 10 to about 100 cm from the opening from which the last gaseous source to contact the threadlines emerges, which fibers have a mean fiber diameter in the range of from about 10 to about 30 μm and are substantially uniform in diameter; wherein said attenuating and drying steps are carried out under conditions of minimal macro scale turbulence.

38. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 37, further comprising:

g. exposing said uniform web to a high energy source selected from the group consisting of heat, electron beam, microwave, and radio frequency irradiation to render a stable crosslink in the synthetic precursor polymer.

39. A method of preparing a nonwoven web having substantially continuous synthetic fine fiber as set forth in Claim 38, further comprising:

h. post treating the stabilized web by humidifying, compacting, embossing, bonding, or laminating, or a combination thereof.